

Listing of Claims

1. (Currently Amended) A method for identifying a compound that modulates angiogenesis, the method comprising the steps of:

(i) contacting the compound with a Sumo Protease (SUSP-1) polypeptide that comprises an amino acid sequence with at least 95% identity to SEQ ID NO:457, wherein the SUSP-1 polypeptide ~~regulates angiogenesis~~has protease activity in an endothelial cell; and

(ii) determining ~~the an~~ effect of the compound upon the SUSP-1 polypeptide, wherein the effect comprises altered SUSP-1 protease activity and the altered protease activity regulates angiogenesis, thereby identifying a compound that modulates angiogenesis.

2. (Previously presented) The method of claim 1, wherein the effect is determined in vitro.

3. (Canceled)

4. (Currently amended) The method of claim 2, wherein the effect is further determined by measuring ligand or substrate binding to the SUSP-1 polypeptide.

5. (Canceled)

6. (Canceled)

7. (Original) The method of claim 1, wherein the polypeptide is expressed in a eukaryotic host cell.

8. (Canceled)

9. (Currently amended) The method of claim 7, wherein the effect is further determined by measuring ligand or substrate binding to the polypeptide.

10. (Canceled)

11. (Canceled)

12. (Original) The method of claim 7, wherein the host cell is an endothelial cell.

13. (Currently amended) The method of claim 12, wherein the effect is further determined by measuring $\alpha\beta 3$ expression.

14. (Currently amended) The method of claim 12, wherein the effect is further determined by measuring a member selected from $\alpha\beta 3$ expression, haptotaxis, and chemotaxis.

15. (Canceled)

16. (Original) The method of claim 1, wherein modulation is inhibition of angiogenesis.

17. (Previously presented) The method of claim 1 wherein the SUSP-1 polypeptide is recombinant.

18. (Withdrawn and currently amended) The method of claim 1, wherein the polypeptide is encoded by a nucleic acid ~~comprises comprising a the~~ nucleotide sequence ~~selected from the group consisting of~~ SEQ ID NO:3, SEQ ID NO:32, SEQ ID NO:43, SEQ ID NO:57, SEQ ID NO:63, SEQ ID NO:68, SEQ ID NO:70, SEQ ID NO:76, SEQ ID NO:81, SEQ ID NO:86, SEQ ID NO:89, SEQ ID NO:120, SEQ ID NO:128, SEQ ID NO:139, SEQ ID NO:153, SEQ ID NO:163, SEQ ID NO:165, SEQ ID NO:169, SEQ ID NO:171, SEQ ID NO:173, SEQ ID NO:175, SEQ ID NO:183, SEQ ID NO:202, SEQ ID NO:210, SEQ ID NO:218, SEQ ID NO:227, SEQ ID NO:232, SEQ ID NO:248, SEQ ID NO:274, SEQ ID NO:285, SEQ ID NO:286, SEQ ID NO:297, SEQ ID NO:307, SEQ ID NO:308, SEQ ID NO:317, SEQ ID NO:318, SEQ ID NO:320, SEQ ID NO:323, SEQ ID NO:324, SEQ ID NO:329, SEQ ID NO:330, SEQ ID NO:340, SEQ ID NO:351, SEQ ID NO:365, SEQ ID NO:377, SEQ ID NO:384, SEQ ID NO:406, SEQ ID NO:408, SEQ ID NO:419, SEQ ID NO:421, SEQ ID NO:428, SEQ ID NO:437, SEQ ID NO:439, SEQ ID NO:445, SEQ ID NO:456, SEQ ID NO:462, SEQ ID NO:481, SEQ ID NO:484, SEQ ID NO:493, SEQ ID NO:496, SEQ ID NO:498, SEQ ID NO:519, SEQ ID NO:521, and SEQ ID NO:523 set forth as SEQ ID NO:456.

19. (Previously presented) The method of claim 1, wherein the SUSP-1 polypeptide comprises SEQ ID NO:457.

20. (Original) The method of claim 1, wherein the compound is an antibody.

21. (Original) The method of claim 1, wherein the compound is an antisense molecule.

22. (Original) The method of claim 1, wherein the compound is a small organic molecule.

23. (Original) The method of claim 1, wherein the compound is a peptide.

24. (Currently Amended) A method for identifying a compound that modulates angiogenesis, the method comprising the steps of:

(i) contacting the compound with a [[a]] Sumo Protease (SUSP-1) polypeptide that comprises an amino acid sequence with at least 95% identity to SEQ ID NO:457, wherein the SUSP-1 polypeptide has protease activity and regulates cell surface expression of an $\alpha v \beta 3$ protein;

(ii) determining the effect of the compound upon an in vitro activity of the SUSP-1 polypeptide, wherein the in vitro effect comprises altered SUSP-1 protease activity; and

(iii) determining the effect the compound upon a cell-based angiogenesis assay using an endothelial cell that expresses the SUSP-1 polypeptide, wherein the effect in the cell-based assay comprises altered cell surface expression of $\alpha v \beta 3$ protein and wherein an altered expression of $\alpha v \beta 3$ protein indicates angiogenesis is modified,

thereby identifying a compound that modulates angiogenesis.

25-37. (Cancelled)

38. (Previously presented) The method of claims 1 or 24, wherein the compound is an siRNA that inhibits expression of a nucleic acid that encodes the SUSP-1 polypeptide in a host cell.